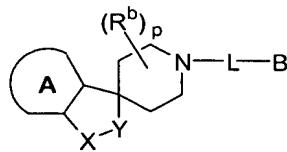
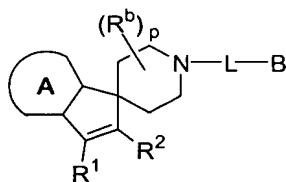


IN THE CLAIMS:

1. (Currently Amended) A compound of formula:



or



I

II

or a pharmaceutically acceptable salt, hydrate, or solvate thereof, wherein

~~A represents a substituted or unsubstituted benzene ring selected from the group consisting of an aromatic ring, a 5- or 6-membered heteroaromatic ring, a 5- or 6-membered cycloalkane ring and a 5- or 6-membered heterocycloalkane ring;~~

~~B is substituted or unsubstituted carbazolyl; selected from the group consisting of cyclo(C₅-C₈)alkyl, heterocyclo(C₅-C₈)alkyl, cyclo(C₅-C₈)alkenyl, heterocyclo(C₅-C₈)alkenyl, aryl and heteroaryl;~~

L is (C₁-C₄)alkylene;

X and Y are each independently a divalent linkage selected from the group consisting of —O—, —C(O)—, —N(R³)—, —C(O)N(R³)—, —S(O)_k—, —SO₂N(R³)—, and —(C₁-C₂)alkylene—, wherein C₁ or C₂ is optionally substituted with —OR³, —N(R³)COR⁴, —C(O)NR³R⁴, —N(R³)CO₂R⁴, —N(R³)C(O)N(R⁴)R⁵, or —(O);

R¹ and R² are each independently selected from the group consisting of H, (C₁-C₄)alkyl, (C₂-C₈)alkenyl, (C₂-C₈)alkynyl, (C₁-C₈)heteroalkyl, aryl, aryl(C₁-C₄)alkyl, —NR⁶C(O)R⁵, —C(O)R⁵ and ~~—NR⁵C(O)NHR⁶ —NR⁵C(O)NR⁶~~;

each R^b is selected from the group consisting of (C₁-C₄)alkyl, aryl, OR⁷, C(O)R⁷ and C(O)NR⁷R⁸;

R³ and R⁴ are independently selected from the group consisting of H, (C₁-C₈)alkyl, hetero(C₁-C₈)alkyl, aryl, aryl(C₁-C₄)alkyl, C(O)R', CO₂R' and C(O)NR'R'';

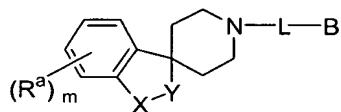
R⁵, R⁶, R⁷ and R⁸ are independently selected from the group consisting of H, (C₁-C₈)alkyl, C(O)R''', CO₂R''', aryl and aryl(C₁-C₄)alkyl;

optionally, R⁷ and R⁸ may be combined with the nitrogen to which each is attached to form a 5-, 6- or 7-membered ring;

R', R'' and R''' are independently selected from the group consisting of H, (C₁-C₈)alkyl, aryl and aryl(C₁-C₄)alkyl; and

the subscript p is an integer of from 0 to 4, 0 to 4; and
the subscript k is an integer of from 0 to 2;
with the proviso that X and Y are not both —O—, —N(R³)—, —S(O)_k— or
—SO₂N(R³)—.

2. (Original) The compound of Claim 1, wherein the subscript p is 0.
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Withdrawn; Currently Amended) The compound of Claim 1, wherein A represents benzene and B is substituted or unsubstituted 3-carbazolyl.
11. (Cancelled)
12. (Withdrawn; Currently Amended) The compound of Claim 1, having the formula (IV):



IV

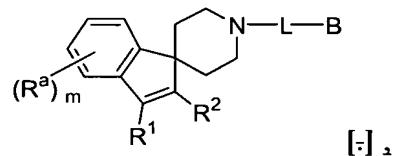
wherein:

each R^a is independently selected from the group consisting of halogen, halo(C₁-C₄)alkyl, (C₁-C₄)alkoxy, aryl(C₁-C₄)alkyl, OC(O)R¹⁷, NR¹⁷R¹⁸, SR¹⁷, cyano, nitro, CO₂R¹⁷, CONR¹⁷R¹⁸, C(O)R¹⁷, OC(O)NR¹⁷R¹⁸, NR¹⁸C(O)R¹⁷, NR¹⁸CO₂R¹⁷, NR¹⁹C(O)NR¹⁷R¹⁸, S(O)_kR¹⁷, S(O)_kNR¹⁷R¹⁸, N₃, (C₄-C₈)cycloalkyl, (C₅-C₈)cycloalkenyl, aryl and heteroaryl, and the subscript k is an integer of from 1 to 2;

R¹⁷, R¹⁸ and R¹⁹ are independently selected from the group consisting of H,

(C₁-C₈)alkyl, (C₁-C₈)heteroalkyl, aryl(C₁-C₄)alkyl and aryl; and
the subscript m is an integer of from 0 to 4.

13. (Withdrawn; Currently Amended) The compound of Claim 12, wherein X or Y is —(C₁-C₂)alkylene—, wherein C₁ or C₂ is substituted with —OH. (C₁-C₂)alkylene—OH.
14. (Withdrawn; Currently Amended) The compound of Claim 12, wherein Y is —C₁ alkylene— substituted with —OH. CH—OH.
15. (Withdrawn; Currently Amended) The compound of Claim 12, wherein X is —(C₁-C₂)alkylene—, wherein C₁ or C₂ is substituted with —N(R³)COR⁴.
(C₁-C₂)alkylene—N(R³)COR⁴.
16. (Withdrawn; Currently Amended) The compound of Claim 12, wherein X is —(C₁-C₂)alkylene—, wherein C₁ or C₂ is substituted with —N(R³)COR⁴ CH—N(R³)COR⁴ and Y is —C₁ alkylene— substituted with —OH. CH—OH.
17. (Cancelled)
18. (Cancelled)
19. (Cancelled)
20. (Currently Amended) The compound of Claim 1 having the formula (V):



V

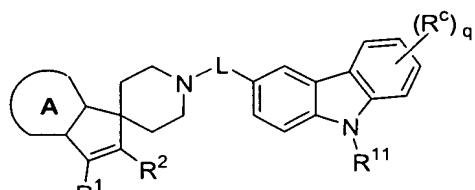
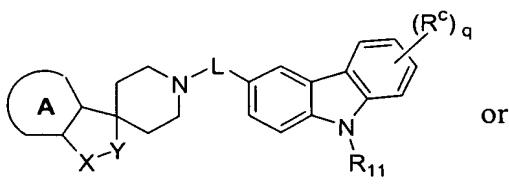
wherein

each R^a is independently halogen, halo(C₁-C₄)alkyl, (C₁-C₄)alkoxy, aryl(C₁-C₄)alkyl, OC(O)R¹⁷, NR¹⁷R¹⁸, SR¹⁷, cyano, nitro, CO₂R¹⁷, CONR¹⁷R¹⁸, C(O)R¹⁷, OC(O)NR¹⁷R¹⁸, NR¹⁸C(O)R¹⁷, NR¹⁸CO₂R¹⁷, NR¹⁹C(O)NR¹⁷R¹⁸, S(O)_kR¹⁷, S(O)_kNR¹⁷R¹⁸, N₃, (C₄-C₈)cycloalkyl, (C₅-C₈)cycloalkenyl, aryl or heteroaryl, wherein R¹⁷, R¹⁸ and R¹⁹ are independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₁-C₈)heteroalkyl, aryl(C₁-C₄)alkyl and aryl, and the subscript k is an integer of from 1 to 2; and

the subscript m is an integer of from 0 to 4.

21. (Original) The compound of Claim 20, wherein R¹ and R² are H.

22. (Original) The compound of Claim 1, having the formula:



wherein

R¹¹ is selected from the group consisting of H, (C₁-C₄)alkyl, (C₂-C₈)alkenyl, (C₂-C₈)alkynyl, (C₁-C₈)heteroalkyl, aryl, aryl(C₁-C₄)alkyl, heteroaryl, heteroaryl(C₁-C₄)alkyl, (C₃-C₈)cycloalkyl, (C₅-C₈)cycloalkenyl, (C₃-C₈)cycloalkyl-alkyl, (C₃-C₈)cycloheteroalkyl, (C₃-C₈)cycloheteroalkyl-alkyl, C(O)R¹², CO₂R¹², C(O)NR¹²R¹³, S(O)_kR¹² and S(O)_kNR¹²R¹³;

each R^c is independently selected from the group consisting of (C₁-C₈)alkyl, (C₂-C₈)alkenyl, (C₂-C₈)alkynyl, (C₁-C₈)heteroalkyl, halo(C₁-C₈)alkyl, halogen, CN, NO₂, OR¹⁴, SR¹⁴, NR¹⁴R¹⁵, (C₃-C₈)cycloalkyl, (C₅-C₈)cycloalkenyl, (C₃-C₈)cycloalkyl-alkyl, (C₃-C₈)cycloheteroalkyl, (C₃-C₈)cycloheteroalkyl-alkyl, C(O)R¹⁴, CO₂R¹⁴, C(O)NR¹⁴R¹⁵, aryl, aryl(C₁-C₄)alkyl, heteroaryl, heteroaryl(C₁-C₄)alkyl, S(O)_kR¹⁴, S(O)_kNR¹⁴R¹⁵, N(R¹⁵)S(O)_kR¹⁴, OC(O)R¹⁴, OCO₂R¹⁴, OC(O)NR¹⁴R¹⁵, N(R¹⁶)C(O)NR¹⁴R¹⁵, N(R¹⁵)C(O)R¹⁴ and N(R¹⁵)CO₂R¹⁴;

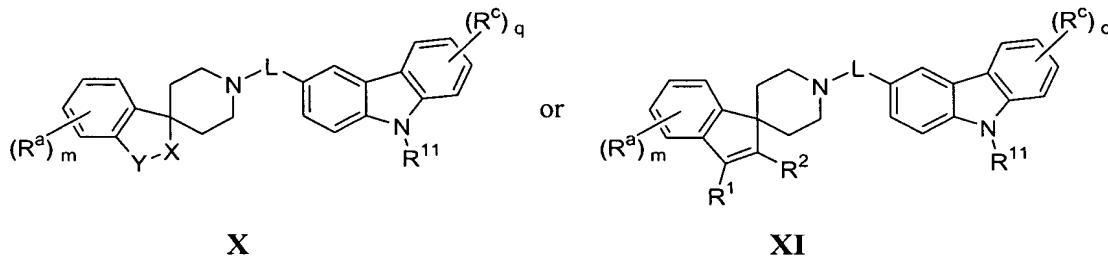
~~optionally, any two adjacent R^e groups may be combined to form a fused aryl ring or (C₅-C₈)cycloalkyl ring;~~

R¹², R¹³, R¹⁴, R¹⁵ and R¹⁶ are independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₁-C₈)heteroalkyl, aryl(C₁-C₄)alkyl and aryl;

the subscript q is an integer of from 0 to 7; and

the subscript k is an integer of from 1 to 2.

23. (Original) The compound of Claim 22, having the formula:



wherein

each R^a is independently selected from the group consisting of halogen, halo(C_1 - C_4)alkyl, (C_1 - C_4)alkoxy, aryl(C_1 - C_4)alkyl, $OC(O)R^{17}$, $NR^{17}R^{18}$, SR^{17} , cyano, nitro, CO_2R^{17} , $CONR^{17}R^{18}$, $C(O)R^{17}$, $OC(O)NR^{17}R^{18}$, $NR^{18}C(O)R^{17}$, $NR^{18}CO_2R^{17}$, $NR^{19}C(O)NR^{17}R^{18}$, $S(O)_kR^{17}$, $S(O)_kNR^{17}R^{18}$, N_3 , (C_4 - C_8)cycloalkyl, (C_5 - C_8)cycloalkenyl, aryl and heteroaryl;

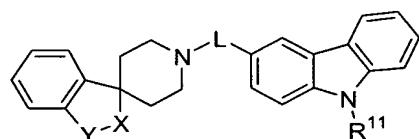
R^{17} , R^{18} and R^{19} are independently selected from the group consisting of H, (C_1 - C_8)alkyl, (C_1 - C_8)heteroalkyl, aryl(C_1 - C_4)alkyl and aryl;

the subscript m is an integer of from 0 to 4; and

each subscript k is an integer of from 1 to 2.

24. (Previously Amended) The compound of any one of Claims 1, 20 and 23, wherein L is methylene.

25. (Previously Amended) The compound of Claim 23, having the formula (Xa):



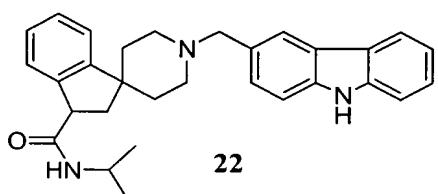
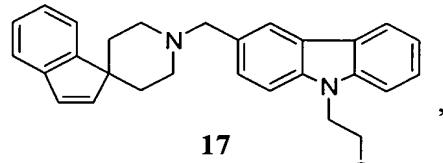
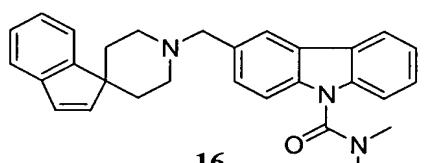
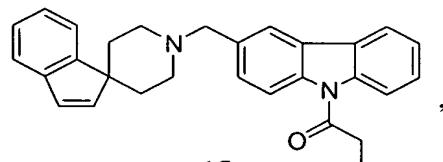
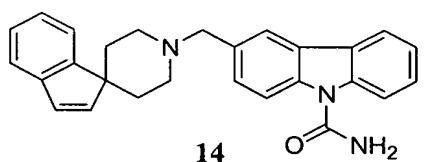
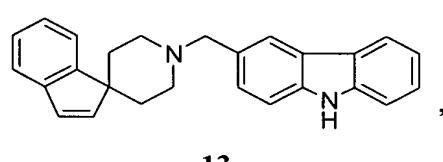
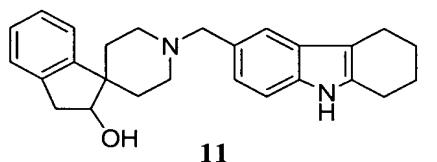
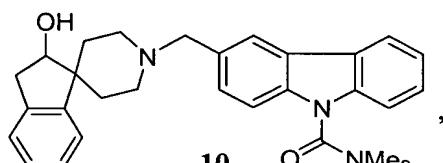
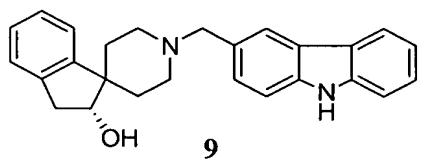
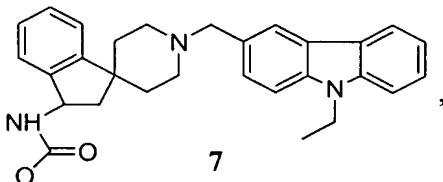
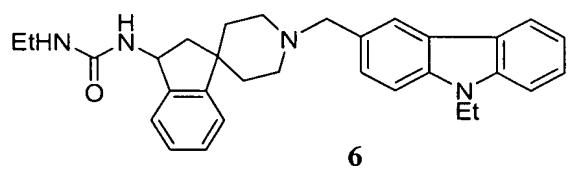
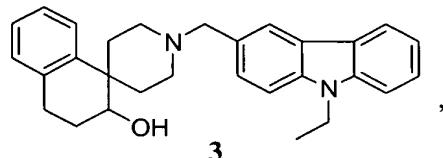
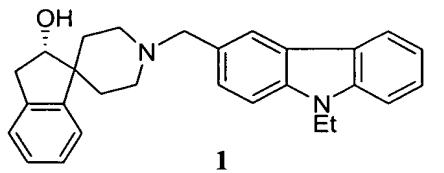
Xa

wherein

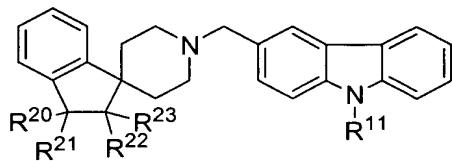
L is methylene; and

X and Y are independently selected from $-(C_1-C_2)alkylene-$, wherein C_1 or C_2 is optionally substituted with $-OR^3$, $-N(R^3)COR^4$, $-C(O)NR^3R^4$ or $-N(R^3)C(O)N(R^4)R^5$.

26. (Original) The compound of Claim 25, having a formula selected from the group consisting of:



27. (Currently Amended) A compound of formula:



or a pharmaceutically acceptable salt, hydrate, or solvate thereof, wherein

R²⁰ and R²³ independently represent H or OR³;

R²¹ and R²² independently represent H, OR³, N(R³)COR⁴, C(O)NR³R⁴, N(R³)CO₂R⁴, N(R³)C(O)N(R⁴)R⁵, N(R³)R⁴, C(O)N(R³)R⁴, N(R³)C(O)R⁴, (CH₂)C(O)N(R³)(R⁴), (CH₂)CO₂R³, or (C₁-C₄)alkyl;

R¹¹ represents H, (C₁-C₄)alkyl, (C₂-C₈)alkenyl, (C₂-C₈)alkynyl, (C₁-C₈)heteroalkyl, aryl, aryl(C₁-C₄)alkyl, heteroaryl, heteroaryl(C₁-C₄)alkyl, (C₃-C₈)cycloalkyl, (C₅-C₈)cycloalkenyl, (C₃-C₈)cycloalkyl-alkyl, (C₃-C₈)cycloheteroalkyl, (C₃-C₈)cycloheteroalkyl-alkyl, C(O)R¹², CO₂R¹², C(O)NR¹²R¹³, S(O)_kR¹² or S(O)_kNR¹²R¹³, and the subscript k is an integer of from 1 to 2;

R¹² and R¹³ independently represent H, (C₁-C₈)alkyl, (C₁-C₈)heteroalkyl, aryl(C₁-C₄)alkyl or aryl;

R³ and R⁴ independently represent H, (C₁-C₈)alkyl, hetero(C₁-C₈)alkyl, aryl, aryl(C₁-C₄)alkyl, C(O)R', CO₂R' or C(O)NR'R"; and

R', R" and R''' are independently selected from the group consisting of H, (C₁-C₈)alkyl, aryl and aryl(C₁-C₄)alkyl.

28. (Original) The compound of Claim 27, wherein R²⁰ and R²³ each represent H, R²² represents OH, and R²¹ represents N(R³)C(O)R⁴.

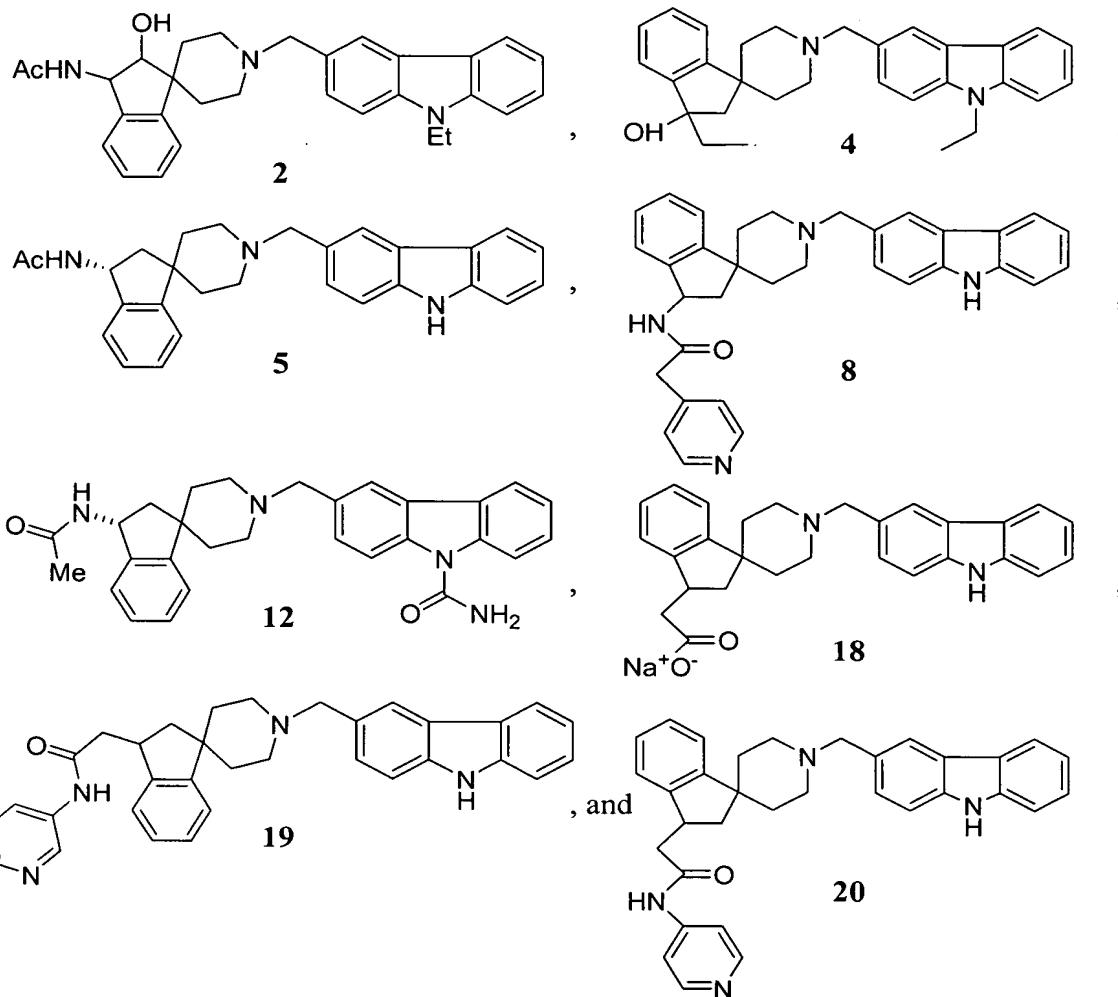
29. (Original) The compound of Claim 27, wherein R²⁰ represents OH, and R²² and R²³ each represent H, and R²¹ represents C₂ alkyl.

30. (Original) The compound of Claim 27, wherein R²⁰, R²², and R²³ each represent H and R²¹ represents N(R³)C(O)R⁴.

31. (Original) The compound of Claim 27, wherein R²⁰, R²², and R²³ each represent H and R²¹ represents (CH₂)CO₂R³.

32. (Original) The compound of Claim 27, wherein R²⁰, R²², and R²³ each represent H and R²¹ represents (CH₂)C(O)N(R³)(R⁴).

33. (Original) The compound of Claim 27, having a formula that is selected from the group consisting of:



34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)
41. (Cancelled)
42. (Previously Amended) The compound of Claim 25, wherein L is methylene.
43. (Withdrawn) A pharmaceutical composition comprising a pharmaceutically acceptable carrier or excipient and a compound of Claim 1.
44. (Previously Amended) A method of treating a condition or disorder selected from the group consisting of obesity, type II diabetes, hypertension, hyperuricemia, stroke, dyslipidemia, coronary artery disease, hypercholesterolemia and atherosclerosis. ~~metabolic disorder~~, comprising administering to a subject in need thereof a therapeutically effective amount of a compound of Claim 1.
45. (Cancelled)
46. (Cancelled)
47. (Cancelled)
48. (Withdrawn) The method of any one of Claims 44, 45 and 46, wherein said compound is administered in combination with a second therapeutic agent.
49. (Withdrawn) The method of Claim 48, wherein said second therapeutic agent is selected from the group consisting of an anti-obesity agent, an anti-diabetic agent, a non-steroidal antiinflammatory agent, an opioid analgesic, an antineoplastic agent, a cholesterol lowering agent, an antithrombotic agent, an anticonvulsant, an antiphychotic agent, a cholinesterase inhibitor, an anticholinergic agent, a dopaminergic agent, interferon β , a multiple sclerosis therapeutic agent, an anti-anxiety agent, an antidepressant, a phosphodiester V inhibitor, an α -2 adrenergic receptor antagonist and an MCHR1 antagonist.
50. (Withdrawn) A method of modifying feeding behavior, comprising administering to a subject an amount of a compound of Claim 1 effective to reduce or enhance food intake by the subject by at least 5%.

51. (Withdrawn) A method of reducing body mass, comprising administering to a subject an amount of a compound of Claim 1 effective to decrease the body mass of the subject by at least 5% of baseline.
52. (Withdrawn) The method of Claim 51, wherein the body mass of the subject is decreased by at least 10% of baseline.
53. (Withdrawn) A method of modulating MCHR2 in a cell, comprising contacting a cell with a compound of Claim 1.
54. (Withdrawn) A method for modulating MCHR2, comprising contacting a protein with a compound of Claim 1.
55. (Withdrawn) The method of Claim 54, wherein said compound is an MCHR2 antagonist.
56. (Withdrawn) A method for identifying a compound that modulates signal transduction, comprising
 - a)- contacting an isolated or recombinant MCHR2 polypeptide with a compound of Claim 1 under conditions suitable for MCHR2-mediated signal transduction;
 - b)- measuring intracellular Ca^{2+} , cAMP or IP_3 in the absence and presence of said compound; and
 - c)- comparing intracellular Ca^{2+} , cAMP or IP_3 levels in the absence and presence of said compound;
wherein an increase or a decrease in intracellular Ca^{2+} , cAMP or IP_3 level in the presence of said compound indicates that said compound modulates signal transduction.
57. (Withdrawn) A method for identifying a compound that modulates signal transduction, comprising
 - a)- contacting an isolated or recombinant MCHR2 polypeptide with an MCHR2 ligand in the absence and presence of a compound of Claim 1 under conditions suitable for G-protein coupling to said polypeptide;

b)- measuring G-protein activation in the absence and presence of said compound; and

c)- comparing G-protein activation in the absence and presence of said compound;

wherein an increase or a decrease in G-protein activation in the presence of said compound indicates that said compound modulates signal transduction.

58. (Withdrawn) A method for identifying a compound that modulates MCHR2, comprising

a)- contacting an isolated or recombinant MCHR2 polypeptide with an MCHR2 ligand in the absence and presence of a compound of Claim 1 under conditions suitable for ligand binding to said polypeptide;

b)- measuring ligand binding to said polypeptide in the absence and presence of said compound; and

c)- comparing ligand binding to said polypeptide in the absence and presence of said compound;

wherein an increase or a decrease in ligand binding in the presence of said compound indicates that said compound modulates MCHR2.

59. (Withdrawn) A method for identifying a compound that modulates MCHR2, comprising

a)- contacting a cell comprising a target gene that is activated by an MCHR2 ligand with a compound of Claim 1 under conditions suitable for transcription or expression of said target gene;

b)- measuring the transcription or expression of said target gene in the absence and presence of said compound; and

c)- comparing the transcription or expression of said target gene in the absence and presence of said compound;

wherein an increase or a decrease in transcription or expression in the presence of said

compound indicates that said compound modulates MCHR2.

60. (Withdrawn) A method for identifying a compound that selectively modulates MCHR2, comprising

- a)- contacting an isolated or recombinant MCHR polypeptide with a compound of Claim 1 under conditions suitable for ligand binding to said MCHR;
- b)- measuring the binding affinities of said compound for said MCHR and for an MCHR2 polypeptide; and
- c)- comparing the binding affinities of said compound for said MCHR and for said MCHR2 polypeptide;

wherein a binding affinity for said MCHR2 polypeptide of at least 10-fold greater than the binding affinity for said MCHR indicates that said MCHR2 compound selectively modulates MCHR2.

61. (Withdrawn) The method of any one of Claims 57, 58, 59, and 60 wherein said compound that modulates MCHR2 is an MCHR2 antagonist.

62. (Withdrawn) A compound identified according to the method of any one of Claims 57, 58, 59 and 60.

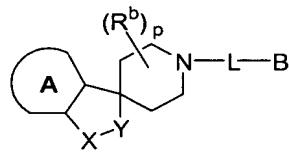
63. (Withdrawn) A method for identifying a compound that modulates MCHR2, comprising

- a)- determining the binding mode of a compound of Claim 61 to MCHR2;
- b)- modifying said compound to provide a test compound that is capable of said binding mode;
- c)- contacting an isolated or recombinant MCHR2 polypeptide with an MCHR2 ligand in the absence and presence of said test compound under conditions suitable for ligand binding to said polypeptide;
- d)- measuring ligand binding to said polypeptide in the absence and presence of said test compound; and

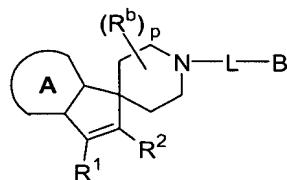
e)- comparing ligand binding to said polypeptide in the absence and presence of said test compound;

wherein an increase or a decrease in ligand binding in the presence of said test compound indicates that said test compound modulates MCHR2.

64. (New) A compound of formula:



or



I

II

or a pharmaceutically acceptable salt, hydrate, or solvate thereof, wherein

A represents a substituted or unsubstituted benzene ring;

B is substituted or unsubstituted carbazolyl, wherein any two adjacent substituent groups may optionally be combined to form a fused aryl ring or (C₅-C₈)cycloalkyl ring;

L is (C₁-C₄)alkylene;

X and Y are each independently —(C₁-C₂)alkylene—, wherein C₁ or C₂ is optionally substituted with —OR³, —N(R³)COR⁴, —C(O)NR³R⁴, —N(R³)CO₂R⁴, —N(R³)C(O)N(R⁴)R⁵, or —(O);

R¹ and R² are each independently selected from the group consisting of H, (C₁-C₄)alkyl, (C₂-C₈)alkenyl, (C₂-C₈)alkynyl, (C₁-C₈)heteroalkyl, aryl, aryl(C₁-C₄)alkyl, —NR⁶C(O)R⁵, —C(O)R⁵ and —NR⁵C(O)NHR⁶;

each R^b is selected from the group consisting of (C₁-C₄)alkyl, aryl, OR⁷, C(O)R⁷ and C(O)NR⁷R⁸;

R³ and R⁴ are independently selected from the group consisting of H, (C₁-C₈)alkyl, hetero(C₁-C₈)alkyl, aryl, aryl(C₁-C₄)alkyl, C(O)R', CO₂R' and C(O)NR'R";

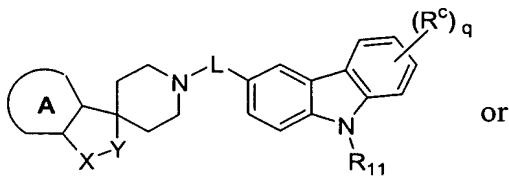
R⁵, R⁶, R⁷ and R⁸ are independently selected from the group consisting of H, (C₁-C₈)alkyl, C(O)R'', CO₂R'', aryl and aryl(C₁-C₄)alkyl;

optionally, R⁷ and R⁸ may be combined with the nitrogen to which each is attached to form a 5-, 6- or 7-membered ring;

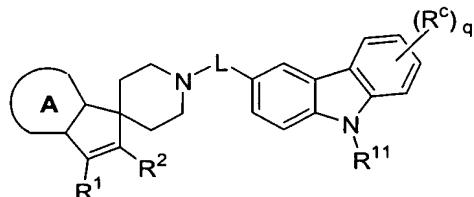
R', R'' and R''' are independently selected from the group consisting of H, (C₁-C₈)alkyl, aryl and aryl(C₁-C₄)alkyl; and

the subscript p is an integer of from 0 to 4.

65. (New) The compound of Claim 64, having the formula:



VII



VIII

wherein

R^{11} is selected from the group consisting of H, (C_1 - C_4)alkyl, (C_2 - C_8)alkenyl, (C_2 - C_8)alkynyl, (C_1 - C_8)heteroalkyl, aryl, aryl(C_1 - C_4)alkyl, heteroaryl, heteroaryl(C_1 - C_4)alkyl, (C_3 - C_8)cycloalkyl, (C_5 - C_8)cycloalkenyl, (C_3 - C_8)cycloalkyl-alkyl, (C_3 - C_8)cycloheteroalkyl, (C_3 - C_8)cycloheteroalkyl-alkyl, $C(O)R^{12}$, CO_2R^{12} , $C(O)NR^{12}R^{13}$, $S(O)_kR^{12}$ and $S(O)_kNR^{12}R^{13}$;

each R^c is independently selected from the group consisting of (C_1 - C_8)alkyl, (C_2 - C_8)alkenyl, (C_2 - C_8)alkynyl, (C_1 - C_8)heteroalkyl, halo(C_1 - C_8)alkyl, halogen, CN, NO_2 , OR^{14} , SR^{14} , $NR^{14}R^{15}$, (C_3 - C_8)cycloalkyl, (C_5 - C_8)cycloalkenyl, (C_3 - C_8)cycloalkyl-alkyl, (C_3 - C_8)cycloheteroalkyl, (C_3 - C_8)cycloheteroalkyl-alkyl, $C(O)R^{14}$, CO_2R^{14} , $C(O)NR^{14}R^{15}$, aryl, aryl(C_1 - C_4)alkyl, heteroaryl, heteroaryl(C_1 - C_4)alkyl, $S(O)_kR^{14}$, $S(O)_kNR^{14}R^{15}$, $N(R^{15})S(O)_kR^{14}$, $OC(O)R^{14}$, OCO_2R^{14} , $OC(O)NR^{14}R^{15}$, $N(R^{16})C(O)NR^{14}R^{15}$, $N(R^{15})C(O)R^{14}$ and $N(R^{15})CO_2R^{14}$;

optionally, any two adjacent R^c groups may be combined to form a fused aryl ring or (C_5 - C_8)cycloalkyl ring;

R^{12} , R^{13} , R^{14} , R^{15} and R^{16} are independently selected from the group consisting of H, (C_1 - C_8)alkyl, (C_1 - C_8)heteroalkyl, aryl(C_1 - C_4)alkyl and aryl;

the subscript q is an integer of from 0 to 7; and

the subscript k is an integer of from 1 to 2.